

What Is Claimed Is:

1. A pressure sensor including a pressure sensor element (10), the pressure sensor element (10) having a diaphragm area (12) and a first fixing area (14), the pressure to be measured exerting a force action (11) on the diaphragm area (12), the first fixing area (14) being connected to a second fixing area (22) of a fixing element (20) to fix the pressure sensor element (10), wherein the first fixing area (14) and the second fixing area (22) are pressure-loaded by the force action (11).
2. The pressure sensor as recited in Claim 1, wherein the pressure sensor element (10) is made of semiconductor material (50) and/or is manufactured using bulk micromechanics.
3. The pressure sensor as recited in one of the preceding claims, wherein the pressure sensor is provided for high pressures, for pressures up to approximately 1,000 bar in particular.
4. The pressure sensor as recited in one of the preceding claims, wherein the pressure sensor is provided for pressures exceeding 1,000 bar.
5. The pressure sensor as recited in one of the preceding claims, wherein the fixing element (20), with respect to its coefficient of thermal expansion, is adapted to the sensor element (10).
6. The pressure sensor as recited in one of the preceding claims, wherein a connecting material (15) is provided between the first fixing area (14) and the second fixing area, the connecting material (15) being comparatively soft in particular.

7. The pressure sensor as recited in one of the preceding claims, wherein resistor elements (16) are provided in the diaphragm area (12).
8. The pressure sensor as recited in one of the preceding claims, wherein the connecting surface between the first fixing area (14) and the second fixing area (22) is parallel to the diaphragm plane.
9. The pressure sensor as recited in one of the preceding claims, wherein the connecting surface between the first fixing area (14) and the second fixing area (22) is provided to be at an acute angle to the diaphragm plane.
10. The pressure sensor as recited in one of the preceding claims, wherein the cross section of the fixing element (20) tapers in the direction of the second fixing area (22).